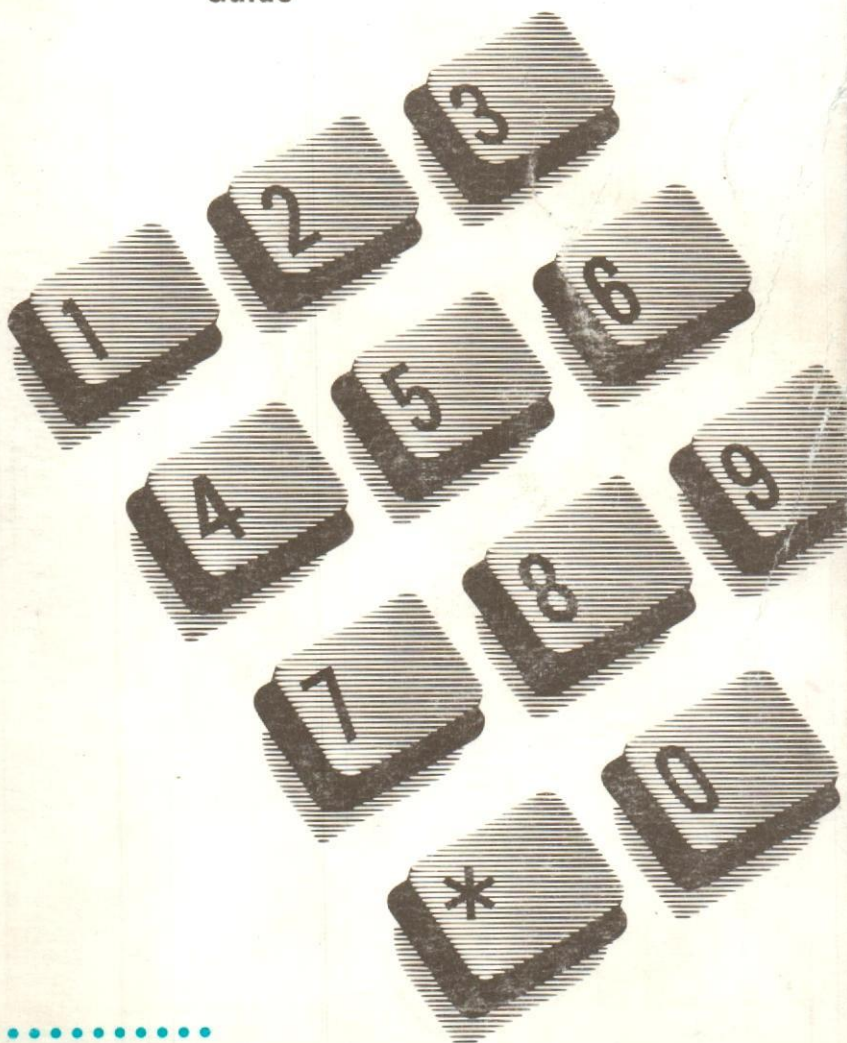


norstar

**SMDR4
System
Coordinator
Guide**



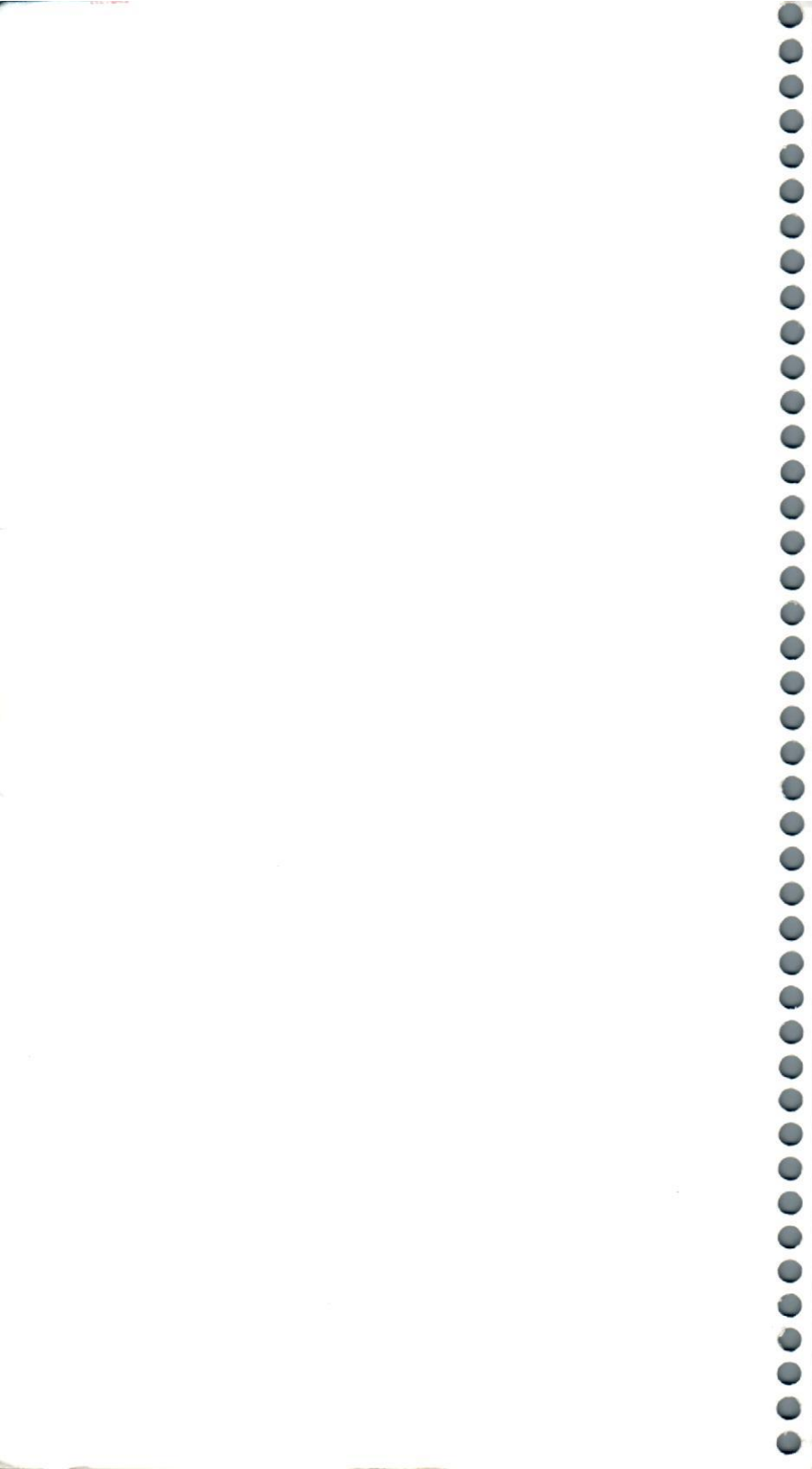


Table of Contents

1.	About This Guide	1-1
	Introduction	1-1
	Guide Conventions	1-1
2.	Getting Started	2-1
	About Station Message Detail Recording 4	2-1
	System Overview	2-2
	Your Role as System Coordinator	2-3
	Programming SMDR4 Using M7310/M7324 Telephones	2-3
	Programming SMDR4 Using M7100/M7208 Telephones	2-4
	Accessing the SMDR4 Main Menu	2-4
	Exiting From the SMDR4 Main Menu	2-5
3.	Administering SMDR4	3-1
	Introduction	3-1
	Setting the Printer Speed	3-2
	SL-1 Record Format	3-3
	SL-1 Standard Record Format	3-3
	SL-1 CLID Records	3-4
	Field Definitions	3-6
	Line 2 (When CLID information is available):	3-6
	SL-1 Record Types	3-7
	Report Type	3-7
	To Set the Report Type Using M7310/M7324 Telephones	3-8
	To Set the Report Type Using M7100/M7208 Telephones	3-10

Account Feature Code	3-10
Creating an Account Code List	3-12
Using Account Codes	3-12
Programming an Account Feature Code Memory	
Button	3-14
Programming an Account Code Autodial	
Button	3-14

4. Norstar Format	4-1
Introduction	4-1
Norstar Record Field Definitions	4-1
Printable Line Descriptions	4-2
Norstar Record Format	4-6
Norstar Standard Record Format	4-7
Norstar Standard CLID Records	4-7
CLID Record Field Definitions	4-8
Norstar Real Time Record Format	4-9
Real Time Field Definitions	4-9
Norstar All Record Format	4-11
Language Preference	4-11

5. Troubleshooting	5-1
Introduction	5-1
Printer Problems	5-1
Ensuring Call Records are Printed	5-1
Error Messages	5-2

Glossary

Index

About This Guide

1

Introduction

This guide provides step-by-step instructions designed to assist you in administering Station Message Detail Recording 4 (SMDR4). SMDR4 is the fourth major release of the SMDR product line.

Guide Conventions

As you work through this guide you will notice that certain conventions have been used to present steps and procedures. Some numbers and words appear in square boxes. These represent numbers and buttons on a Norstar telephone dial pad. For example:

1. Press Feature 9 * 2

This means, press the Feature button, then press 9 * 2 on the telephone dial pad.

Words appearing on the Norstar display are represented in a similar display text. For example:

1. Press NEXT

This means press the corresponding display button.

Getting Started

2

About Station Message Detail Recording 4

Station Message Detail Recording 4 (SMDR4) is a unit that is connected to your Norstar Key Service Unit to record call activity. Each time a telephone call is made to or from your company, the information about the call is recorded. When the call is completed, information about the call is printed out in a Standard Call Record. SMDR4 also provides information about the call as the event occurs, called Real Time Call Records.

Note: SMDR4 delivers Custom Local Area Signalling Services (CLASS), Call Management Services (CMS) and Automatic Number Identification (ANI) information in the form of Calling Line Identification (CLID) records. This information is only available if the appropriate Norstar hardware is installed and the service is available from your public telephone company. Contact your Customer Service representative for more information.

SMDR4 provides information about:

- date and time of the call, and digits dialed
- the originating station
- whether an incoming call was answered
- call duration and ring duration
- whether a call was transferred or put on hold
- elapsed time between origin of a call and when it was answered
- calls associated with Account Codes and Passwords
- standard records with Calling Line Identification (CLID)
- Real Time records for ringing, answered, unanswered, transferred, and released events for incoming calls with CLID information
- calls in both CLID and Real Time CLID formats

The information collected by SMDR4 can be used to:

- allocate telephone costs to departments or individuals
- charge back telephone costs to billable clients through Account Codes
- determine whether the telephone system is being used efficiently
- guard against abuse of the telephone system
- provide immediate call information to a database through CLID

System Overview

The SMDR4 is a peripheral connected to the Norstar Key Service Unit (KSU). SMDR4 connects to any data collection device to provide records about telephone call activity as shown in Figure 2.1.

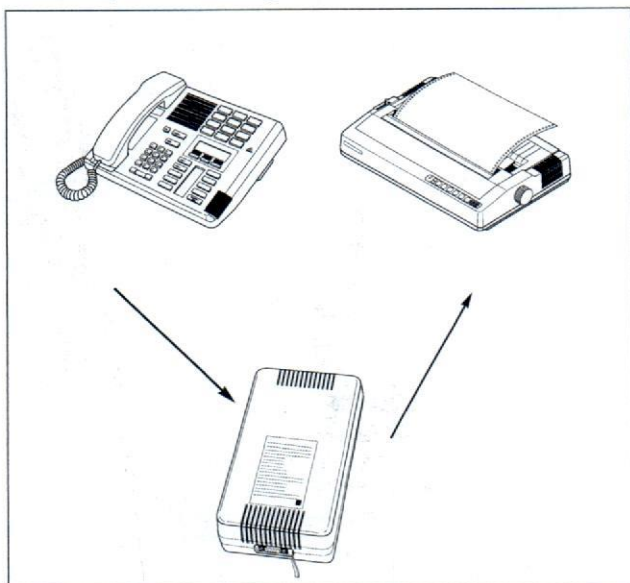


Figure 2.1: SMDR4 System Overview

Important: Only one SMDR4 unit can be installed per KSU.

Note: SMDR4 is not compatible with Norstar DR1 KSUs.

Your Role as System Coordinator

As System Coordinator, you perform the initial and ongoing administration tasks. Your tasks include:

- administering SMDR4
- determining Account Codes which are used as a reference for tracking telephone calls
- interpreting SMDR4 reports

Programming SMDR4 Using M7310/M7324 Telephones

When you use an M7310 or M7324 telephone, prompts and menu selections appear in the first line of the telephone display.

Commands for the three display buttons appear in the second line of the display. Pressing a display button performs the function specified on the option line. Figure 2.2 shows an example of a two line display.

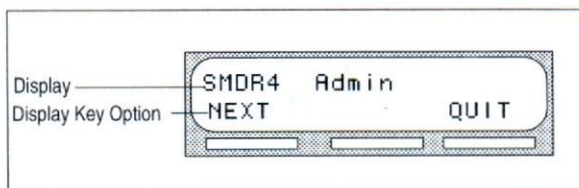


Figure 2.2: M7310/M7324 Telephone Display

Programming SMDR4 Using M7100/M7208 Telephones

When you use M7100 or M7208 telephones, only prompts and menu selections appear on the display. Figure 2.3 shows an example of the M7208 display.

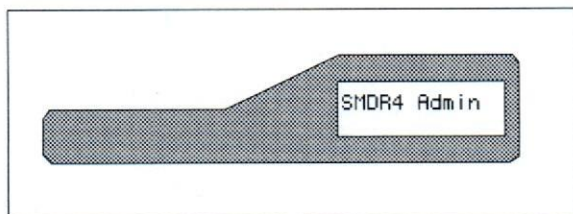


Figure 2.3: M7208 Telephone Display

SMDR4 commands are selected from the M7100 or M7208 dial pad. For example:

Press for NEXT

Press for SHOW

Press for CHANGE

Accessing the SMDR4 Main Menu

SMDR4 menus are accessed by entering the Administration Feature Code on your telephone dial pad. As System Coordinator, you should be the **only** person with access to Administration functions.

To access the SMDR4 Administration Menu:

1. Press
The display shows:



Note: All changes in SMDR4 Administration parameters are implemented immediately after they are selected, not after the SMDR4 Administration session is ended.

Exiting From the SMDR4 Main Menu

After you have selected your specific parameters and want to exit from SMDR4 Administration, follow these steps:

1. Press
- or**
2. Press QUIT at the Main Menu.
- or**
3. Press twice.

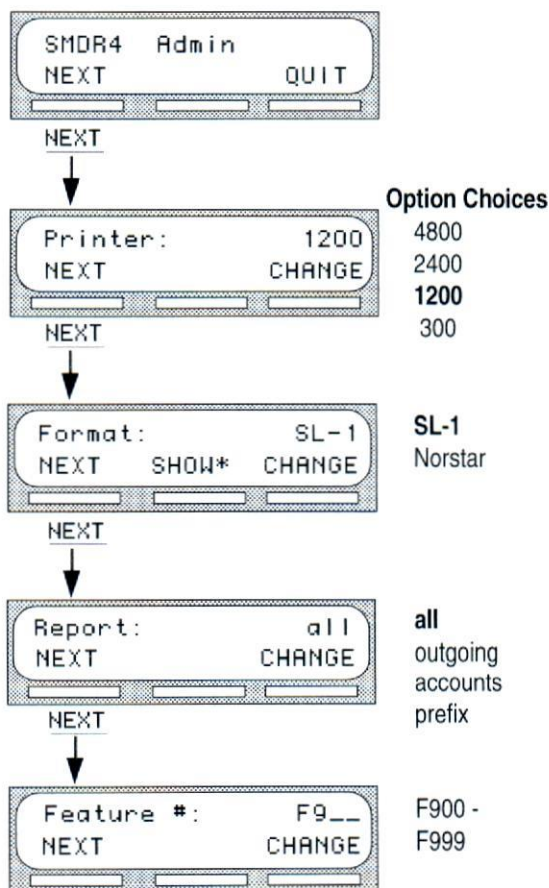
Any one of these commands returns you to the Norstar display.

Administering SMDR4

3

Introduction

SMDR4 uses programming parameters to specify the kinds of calls collected. Each programming parameter has a default setting (shown in bold below) that can be changed at any time. The display screens that are used to assign SMDR4 programming parameters are shown below:



* Appears on DR5 or greater systems only.

Setting the Printer Speed

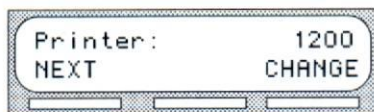
Printers with an RS232c serial port equipped with 300, 1200, 2400 or 4800 baud are suitable. The recommended printer speeds for the different KSUs are listed below:

- for the 3X8 KSU, use 1200 baud
- for the Compact KSU, use 1200 baud
- for the Modular KSU, use 2400 baud

Note: The amount of data transmitted by SMDR4 is dependent on the call activity and the report format you have selected. Therefore, using higher baud rates ensure the records are printed.

You must access SMDR4 Admin to set the printer speed.

1. Press NEXT until the display shows:



2. Press CHANGE until the desired printer speed appears on the display.

SL-1 Record Format

SMDR4 defaults to the SL-1 format. SL-1 records are alphanumeric and are always printed in English.

The SL-1 record format is primarily used when the SMDR4 output is being supplied to commercial call accounting packages or equipment.

The SL-1 records support Standard as well as Calling Line Identification (CLID) records.

SL-1 Standard Record Format

To select the SL-1 Standard format through SMDR4 Admin :

1. Press NEXT until the display shows:

Format:	SL-1	
NEXT	SHOW	CHANGE

2. Press SHOW. The display shows:

SL-1	Standard
NEXT	CHANGE

An example of an outgoing call on line 52 that is placed by station 7425 is shown in Figure 3.1.

```
N 027 00 DN7425 T052000 08/01 14:03 00:01:32 5551212
```

Figure 3.1: Standard Outgoing Call

An example of an Incoming Call on line 47 that is answered by station 2221 is shown in Figure 3.2.

```
N 028 00   T047000   DN2221   08/01   14:22   00:12:04
```

Figure 3.2: Incoming Call

An example of an outgoing call on line 38 is placed by station 7447 and transferred to station 2221 is shown in Figure 3.3.

```
S 029 00   DN7447   T038000   08/01   15:02           8761344
E 030 00   T038000   DN2221   08/01   15:07
```

Figure 3.3: Normal Transferred Call

SL-1 CLID Records

SL-1 records also support Calling Line Identification (CLID) records through Administration.

Note: The Norstar KSU must be properly configured to enable SMDR4 to report the CLID information.

To select the SL-1 CLID format you must access the SMDR4 Admin.

1. Press NEXT until the display shows:

Format:		SL-1
NEXT	SHOW	CHANGE

2. Press SHOW. The display shows:

SL-1	Standard
NEXT	CHANGE

3. Press CHANGE. The display shows:

SL-1:	CLID
NEXT	CHANGE

The CLID number is always 16 digits. Any missing numbers are represented by an "x". If there is no CLID information available then no CLID record will be delivered.

The SL-1 CLID record consists of two lines. The CLID number information (if available) is presented in the third character position of the second line of the record.

Some examples of SL-1 CLID records are shown below:

An Incoming Call on line 38 is answered by station 2221 with CLID enabled and the CLID number available as 4032919000 is shown in Figure 3.4.

N 034	00	T038000	DN2221	01/01	15:32	00:10:24
4032919000xxxxxx						

Figure 3.4: Incoming Call with CLID enabled.

An Incoming Call on line 37 is answered by station 2211 with CLID enabled, and the CLID number is not available as shown in Figure 3.5.

N 035	00	T037000	DN2211	01/01	14:22	00:12:04
-------	----	---------	--------	-------	-------	----------

Figure 3.5: Incoming Call with no CLID information available

An Incoming call on line 38 is answered by station 7447 and transferred to station 2223. CLID is enabled and the CLID number available is 4032919001 as shown in Figure 3.6.

S 029	00	T038000	DN7447	08/01	15:02	
4032919001xxxxxx						
E 030	00	T038000	DN2223	01/01	15:07	
4032919001xxxxxx						

Figure 3.6: Transferred Call with CLID information available

Field Definitions

The fields for lines 1 and 2 SL-1 Records are summarized below:

Line 1:

Column	Name	Format	Definition
1	RecType	Y	Record type
2	Blank		Blank space
3-5	RecNo	XXX	Record
			Seq number
6	Blank		Blank space
7-8	CustNo	00	Customer number
9	Blank		Blank space
10-16	OrigID	TXXX000	Line number
		DNXXXX	STN number
		CF00001	Conference
17	Blank		Blank space
18-24	TerID	TXXX000	Line number
		DNXXXX	STN number
25	Blank		Blank space
26-37	Blank		Blank space
38-48	TimeStamp	MM/DD HH:MM	Time stamp
49	Blank		Blank space
50-57	Duration	HH:MM:SS	Call duration
58	Blank		Blank space
59-90	Digits	XXX...X	Dialed digits
50-61	AccCode	XXX...X	Account code

Line 2 (When CLID information is available):

Column	Name	Format	Definition
3-18	CLID#	XXX...X	CLID Number

SL-1 Record Types

SMDR4 generates the following SL-1 record types:

Letter Code	Record Type
A	Authorization Record
C	Charge Record
E	End Record
I	Initialization Record
M	Conference Charge Record
N	Normal Record
S	Start Record

The I record contains the RecType and TimeStamp only.
The S, E, M and C records never contain the Duration field.
The E records never contain any digits.

Note: The I record does not contain CLID number; all other record types will contain the CLID number (if delivered).

Report Type

The Call Report option allows you to specify the type of calls to be collected. This option can be set to:

- all calls
- outgoing calls only
- calls with Account Codes or Passwords
- prefix

Only one of the above reports can be selected at one time. The report type default is **all** and can be changed through SMDR4 Administration.

All

SMDR4 reports all calls except those which are less than two seconds in duration.

Outgoing

SMDR4 reports all outgoing calls more than two seconds in duration.

Accounts

SMDR4 reports only calls with account codes or password restriction overrides associated with them.

Prefix

SMDR4 reports only calls matching the pre-determined digit strings.

Note: Invalid Password attempts are reported regardless of the Report Type selected. Real time call records are not affected, regardless of the Report Type selected.

To Set the Report Type Using M7310/M7324 Telephones

To set the Report Type you must access the SMDR4 Admin menu. (See Section 2: Getting Started for information on accessing SMDR4 Admin).

1. Press NEXT until the display shows:



2. Press CHANGE to select the Report Type.

If you select the prefix report type, you must also specify the prefix digits.

The purpose of the prefix option is to record long distance calls, area codes or calls to specific numbers.

If the first digits dialed match one or more of the programable strings, the call is recorded. You can have a maximum of eight prefix strings assigned at one time. The maximum length for each string is eight digits.

To specify the prefix digits:

1. Press CHANGE

The display shows:

Report:	prefix	
NEXT	SHOW	CHANGE

2. Press SHOW

The display shows:

Prefix1 0		
CLEAR	OK	

3. Using the dial pad, enter the prefix digits. (In this example 9293 is used). The display shows:

Prefix1 9293		
BKSP	CLEAR	OK

Either the BKSP or CLEAR buttons can be used to correct characters that are entered in error. The BKSP button erases one character at a time. The CLEAR button erases all of the characters you have entered.

When you are programming SMDR4 from an M7310 or M7324 telephone, the asterisk (*) button is accepted as a wild card character that represents any digit.

Note: The defaults are 0, 1, 90, 91, 411 and 9411. A maximum of eight digits are entered.

4. Press OK to continue to the next prefix.

To Set the Report Type Using M7100/M7208 Telephones

The M7100 and the M7208 telephones have a one line display. When you are programming SMDR4 in Report Type Prefix, the [*] and [#] buttons have different functions.

The [*] button represents the CLEAR command. Pressing the [*] button will erase all of the digits that have been entered.

The [#] button represents the NEXT command. Press [#] to go to the next prefix.

Note: You cannot use the [*] as a "wild card" character when adding prefix digits on the M7100/M7208 telephones.

Account Feature Code

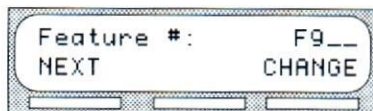
Account Codes allow you to cross-reference telephone calls from your company to different SMDR4 clients or telephone activities.

Before Account Codes can be entered by users, an Account Feature Code must be established. The Feature Code can be any number between 900 and 999.

To set the Account Feature Code, you must access SMDR4 Administration. (See Section 2: Getting Started, for information on accessing SMDR4 Administration). After the Feature Code is entered, users can enter the appropriate Account Code to the Call.

To set the Account Feature Code:

1. Press NEXT until the display shows:



2. Press CHANGE
3. Enter the last two digits of the Account Feature Code.
4. Press NEXT to return to the main menu.

Note: If the display shows:



you must select another code.

Important: Do not forget to provide your co-workers with the SMDR4 Account Feature Code.

Creating an Account Code List

Account Codes create a reference for tracking telephone calls. For example, someone contacting a billable client, would enter an assigned code each time a call was placed to that client.

Account Codes are from one to 12 digits long. Account Codes cannot contain the * or # symbols. An example of an Account Code List is shown in Figure 3.7.

Account Code	Description
11127	Barry Rogers
37	Field Support
239	L.E. Warner
45	Monique Leblanc
1552	Dawn M. Smith
53	Modern Ways Ltd.
100	Long Distance

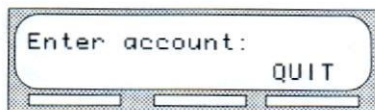
Figure 3.7: Account Code List

Using Account Codes

Account Codes can be associated with any incoming or outgoing calls. Account Codes can be entered from any Norstar set by first entering the Account Feature Code (F9_ _).

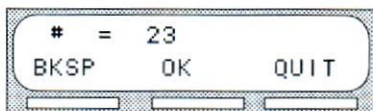
To use Account Codes:

1. Select an outside line.
2. Press and enter the three digit SMDR4 Account Feature Code. The display shows:



Enter account: QUIT

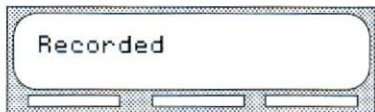
3. Enter a one to 12 digit number. (In this example, the number 23 is used). The display shows:



Note: If an Account Code is entered incorrectly, press **BKSP** and re-enter the number.

4. Press **OK**

The display shows:



Note: When you are using an M7100 or an M7208 telephone, press **#** for **OK** and ***** for **BKSP**.

An Account Code can be entered at any time during a call. However, you cannot enter the account code when a call is on hold or when an Administration session is in progress.

Programming an Account Feature Code Memory Button

You can program a memory button on your Norstar telephone to activate the SMDR4 Account Feature Code. For more information about memory buttons, refer to your **Norstar Telephone User Card**.

To program a memory button:

1. Press *
2. Press a programmable Norstar button.
3. Press
4. Enter the three digit SMDR4 Account Feature Code.
5. Using the paper labels supplied with the Norstar telephone, label the button Account Feature Code.

Programming an Account Code Autodial Button

Frequently dialed Account Codes can be programmed on M7310 dual memory buttons. These are called Account Code buttons.

To program an Account Code button:

1. Press *
2. Press a dual memory button.
3. Using the dial pad enter the Account Code.
4. Press OK

Norstar Format

4

Introduction

This section describes the Norstar record format in several different ways. It explains how to select different report formats as well as how to interpret the reports.

Norstar Record Field Definitions

The following list shows all of the lines that can be printed by SMDR4 in the Norstar format.

```

----- MM/DD/YY HH:MM:SS LINE = XXXX STN = XXXXXXXX
----- MM/DD/YY HH:MM:SS LINE = XXXX LINE = XXXX
----- MM/DD/YY HH:MM:SS LINE = XXXX
----- MM/DD/YY HH:MM:SS
SMDR4 RESTART
00:00:00 NO ANSWER RINGING 0:00
00:00:00 INCOMING CALL RINGING 0:00
00:00:00 OUTGOING CALL
00:00:00 HOLD
00:00:00 UNHOLD
00:00:00 CONFERENCE STN2 = 7425
00:00:00 CONFERENCE LINE = 0052
00:00:00 CONFERENCE END
00:00:00 TRANSFERRED
00:00:00 FROM TRANSFER
00:00:00 CALL RELEASED
00:00:00 DIGITS DIALED 9369552
00:00:00 INVALID PASSWORD
00:00:00 ACCOUNT CODE 123
RESTRICTION PASSWORD 99
RECORDS LOST
LINE = 0015
CALLING NUMBER 4032919123
NAME UNKNOWN
LONG DISTANCE
UNKNOWN
*MMDDYY HHMMSS LLLLLL SSSSSS DDDDDDDDDDDD NNNNNNNNNNNN X Y

```

For non-Real Time, each line has a maximum of three fields (except for the header line).

The second field describes an action associated with that call. Actions can be either a call state like hold or transfer, or a user action like account code entry. The first field is the time the associated action occurred. The time is an offset from the start time of the call indicated in the header. The third field is data which further describes the action indicated in the second field.

The header line has a maximum of five fields:

- the first field is always eight dashes
- the second field is the date the call originated
- the third field is the time the call originated
- the fourth field is the line being used
- the fifth field is either the line or station that is using the line in the fourth field

Printable Line Descriptions

The line below is printed indicating the start of a call record, or the continuation of a call record after a transfer. This record can have three, four or five fields. The LINE number is fixed at four digits. The STN Directory Number (DN) can be from two to seven digits in length. The time reflects the time the call started. For incoming calls, this is when the call is answered. For Outgoing calls it is the time the line is seized. The fifth field can be either a station or a line.

----- MM/DD/YY HH:MM:SS LINE = XXXX STN = XXXXXXXX
--

The line below is printed after the header line when SMDR4 or the KSU is restarted.

SMDR4 RESTART

The line below is printed after the header line (with all five fields) or after the third line of Calling Line Identification (CLID) information. The time in the header line is when the call was actually answered. This time minus the ringing duration (the third field) is when the call actually started ringing.

00:00:00	INCOMING CALL	RINGING 0:04
----------	---------------	--------------

The line below is printed after the header line (with all five fields). The time in the header line field indicates when the call was initiated.

00:00:00	OUTGOING CALL
----------	---------------

The line below is printed after the header line when an incoming call is not answered.

00:00:00	NO ANSWER	RINGING 0:22
----------	-----------	--------------

The lines below indicate when the call was put on hold or taken off hold.

00:00:04	HOLD
00:00:06	UNHOLD

The lines below are printed at the start and the end of a conference. The third party in the conference could be a second station or a second line as indicated in the third field.

00:00:12	CONFERENCE	STN2 = 7425
00:00:12	CONFERENCE	LINE2 = 0052
00:00:45	CONFERENCE	END

The line below is printed when a call has been transferred.

00:00:00 TRANSFERRED

The line below is printed after the header line when a call has been transferred. It indicates the start of the call at the new station that receives the transfer.

00:00:00 FROM TRANSFER

The line below is printed after the last state of a call. It is followed by a carriage return and two line feeds so that there is a blank line before the start of the next call record.

00:00:00 CALL RELEASED

The line below is printed when digits dialed are displayed in Outgoing call records. A maximum of 32 digits can be displayed:

DIGITS DIALED	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
---------------	--------------------------------------

The line below is printed when the user or caller enters an invalid password:

00:00:00 INVALID PASSWORD

The line below is printed when an account code is entered. Account codes can be a maximum of 12 digits.

00:00:00 ACCOUNT CODE	XXXXXXXXXXXX
-----------------------	--------------

The line below is printed when a password is entered. The password ID can be a maximum of two digits (00-99). The record indicates the password override ID and not the password itself.

```
00:00:00  RESTRICTION PASSWORD  XX
```

The line below is printed as the last line of a call record if the call states were missed or if a call was missed altogether. It is followed by a carriage return and two line feeds so that there is a blank line before the start of the next call record.

```
RECORDS LOST
```

The line below is printed identifying the physical line of an incoming call on a target line. The line number is fixed at four digits (with leading zeros).

```
LINE = XXXX
```

The lines below are printed when CLID information is available. The calling number displayed can be a maximum of 12 characters of which a maximum of eleven can be digits. If a number received by the KSU is longer than eleven digits, then a "/" is the first character, followed by the eleven least significant digits. The name can be a maximum of 15 characters. No indication is given if the name has been truncated. When no name or number is sent, each of the name or the number can show "PRIVATE" or "UNKNOWN" depending on the reason for the absence. The third CLID line will show either "UNKNOWN" or "LONG DISTANCE":

```
CALLING NUMBER  XXXXXXXXXXXXX
NAME            XXXXXXXXXXXXXXXXX
LONG DISTANCE
UNKNOWN
```


Norstar Record Format

There are four Norstar record formats available through SMDR4 Administration. The display screens are shown below:

Format:	Norstar	
NEXT	SHOW	CHANGE

SHOW



Norstar:	Standard	
NEXT		CHANGE

CHANGE



Norstar:	CLID	
NEXT		CHANGE

CHANGE



Norstar:	RealTime	
NEXT		CHANGE

CHANGE



Norstar:	All	
NEXT		CHANGE

Norstar Standard Record Format

Norstar Standard format records always start with a header line indicating the date (MM/DD/YY) time (HH/MM/SS); LINE field and STN field. The records have at least one event line showing an event and time stamp.

An example of an Outgoing call in Standard format is shown in Figure 4.1.

```
----- 12/25/93 11:39:43 LINE = 0003 STN = 7425
00:00:00 OUTGOING CALL
          DIGITS DIALED 5551212
00:00:37 ACCOUNT CODE 87
00:12:59 CALL RELEASED
```

Figure 4.1: Standard Outgoing Call

An example of an Incoming Call in Standard format is shown in Figure 4.2

```
----- 11/13/90 12:00:01 LINE = 0083 STN = 7726
00:00:00 INCOMING CALL RINGING 0:32
00:00:39 HOLD
00:01:12 UNHOLD
00:02:47 CALL RELEASED
```

Figure 4.2: Standard Incoming Call

Norstar CLID Record Format

When this option is selected, any CLID information received from the KSU for an incoming call will be printed after the header and followed by the event lines. Therefore, there is one occurrence of CLID per call. If no CLID information is received, then no CLID field appears in the record.

Note: The Norstar KSU must be properly configured to enable CLID information.

An example of an incoming call in the CLID format is shown in Figure 4.3.

```
----- 17/12/93 11:12:01 LINE = 0013 STN = 7465
CALLING NUMBER 4032919123
NAME UNKNOWN
LONG DISTANCE
00:00:00 INCOMING CALL RINGING 0:32
00:00:39 HOLD
00:01:12 UNHOLD
00:02:47 CALL RELEASED
```

Figure 4.3: Standard CLID Incoming Call Record

An example of an abandoned incoming call in the CLID format is shown in Figure 4.4.

```
----- 03/19/93 20:30:00 LINE = 0035
CALLING NUMBER 4032919123
NAME UNKNOWN
LONG DISTANCE
00:00:00 NO ANSWER RINGING 3:15
```

Figure 4.4: Abandoned Incoming Call with CLID

CLID Record Field Definitions

The first CLID line after the header line is the CALLING NUMBER:

- A maximum of 12 characters including the "/" which indicates truncation
- PRIVATE (if Private Number indication is received)
- UNKNOWN (if no data is received in the number field)

The second CLID line after the header line is the NAME:

- 15 characters maximum
- PRIVATE (if Private Name indication is received)
- UNKNOWN (if no data is received in the name field)

The third CLID line after the header line is either LONG DISTANCE or UNKNOWN.

Norstar Real Time Record Format

Real Time call records are one line long. All Real Time records begin with an asterisk (*) to differentiate them from non-Real Time Call records. Real Time records are generated only when CLID information is available and for the following five call states:

- Ringing is represented by the letter "G"
- Answered is represented by the letter "A"
- No Answer is represented by the letter "N"
- Transfer is represented by the letter "T"
- Released is represented by the letter "R"

The RINGING call state is unique to Real Time records because it indicates a ringing line as soon as SMDR4 received the CLID information. The KSU receives the CLID information between the first and second ring cycle.

Real Time Field Definitions

The first field is the date field and is a fixed length of six digits (MMDDYY). The month, day or year may be preceded with a leading 0 to keep the field length fixed. For example, 010593 is January 5, 1993.

The second field is the time which is also a fixed field with six digits (HHMMSS). There are no separators between hour, minute and second.

The third field is the line which is associated with the call being tracked. The line is fixed at four digits and may have leading zeros. For example, 0019 is line 19.

The fourth field is the Directory Number (DN) of the station associated with the call. DNs can be from two to seven digits long. If the DN is less than seven digits there are no leading zeros because this field is not fixed.

The fifth field is the first CLID field which is the number. The number can be a maximum of 12 characters. (11 digits maximum and a "/" character). There is always information in this field. If no number is available, either UNKNOWN or PRIVATE will appear in this field.

The sixth field is CLID name which is a maximum of 15 characters long. There is always information in this field. If no name is available, either UNKNOWN or PRIVATE will appear in this field.

The seventh field is the CLID call type which is either UNKNOWN or LONG DISTANCE. In the call record, UNKNOWN is represented by the letter U and LONG DISTANCE is represented by the letter D. This field will always have information.

The eighth field indicates the call state of the Real Time record. This field always contains a call state indicator and is followed immediately by a carriage return and two line feeds.

An example of a call, ringing, answered and released is shown in Figure 4.5.

*030193 154615 0019		6137635114	BNR OTTAWA	D G
*030193 154623 0019	7832	6137635114	BNR OTTAWA	D A
*030193 154831 0019	7832	6137635114	BNR OTTAWA	D R

Figure 4.5: Real Time Incoming Call

An example of a Transferred Call is shown in Figure 4.6.

*112393 094105 0003		2919000	NT MCS CALGARY	U G
*112393 094111 0003	7344	2919000	NT MCS CALGARY	U A
*112393 094156 0003	7440	2919000	NT MCS CALGARY	U T
*112393 094414 0003	7440	2919000	NT MCS CALGARY	U R

Figure 4.6: Real Time Transferred Call

Norstar All Record Format

When this option is selected, Standard, CLID and Real Time records are provided.

Language Preference

The Norstar format records can be printed in English or in French. The French selection option is available only when French is offered by the KSU. To select the language option through SMDR4 Administration.

1. Press NEXT until the display shows:

Language:	English
NEXT	CHANGE

2. Press CHANGE to select the language.

Troubleshooting

5

Introduction

This section provides solutions to problems you might encounter while programming and maintaining the SMDR4 unit.

Problems are grouped into two categories: Printer Problems and Error Messages.

Printer Problems

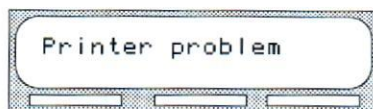
Problem: Records are not printing.

Solution: Ensure the printer:

- is connected to SMDR4
- is on-line
- is properly loaded with paper

Ensuring Call Records are Printed

If the printer is off-line from SMDR4, the following message appears on the display for three seconds when you access SMDR4 Administration:



If there is nothing wrong with the printer set up, then ensure SMDR4 is configured to the same speed as your printer. Refer to Section 3, Administering SMDR4 for more information.

Problem: Only certain calls are being printed.

Solution: When a record is not printed, follow the steps below:

- The Call Reporting option might be screening out calls that you want recorded. For example, if the Call Report is set for outgoing calls, then only outgoing calls are printed. Refer to Section 3, Administering SMDR4.
- A user must press OK or ☐ after entering an Account Code for the record to be printed. Refer to Section 3, Administering SMDR4 for user training information.
- SMDR4 might have been restarted. It takes up to 60 seconds after the system is restarted before any calls are recorded. Calls made during this time are not recorded. SMDR4 will start printing records after this 60 second period.

Error Messages

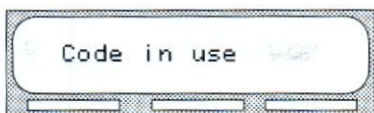
SMDR4 shows error messages on the telephone display, or on printed records.

Message:

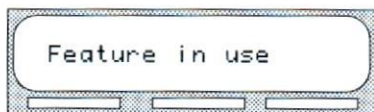


This message appears if an unassigned Feature Code is entered.

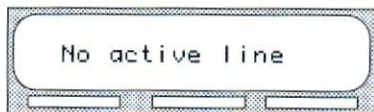
Access SMDR4 Administration to determine the correct Feature Code. Refer to Section 3, Administering SMDR4.

Message:

This message appears during SMDR4 Administration. The Account Code Feature number entered already exists within the Norstar system.

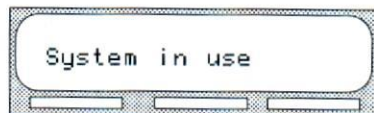
Message:

This message appears when two users try to access SMDR4 Administration simultaneously.

Message:

This message is caused by inputting the Account Feature Code when an external line has not been selected, or is on hold.

Use an Account Code on active outside lines.

Message:

This message means the Feature Code for another application is being administered at this time.

SMDR4 has internal event buffers that store all information relating to call records. If the system becomes overloaded because of excessively high call activity, records can be lost. This message appears in the printed call records:

RECORDS LOST

You might require a higher speed printer, or an external print buffer device.

Glossary

Account Code

A numeric code up to 12 digits used by SMDR4 to associate telephone calls with clients, departments, projects, or individuals in a company.

Account Feature Code

A three digit number that enables users to enter an SMDR4 account code from a Norstar telephone.

Baud

A variable unit of data transmission speed equal to one bit per second.

Call Accounting

An optional software program that can be used to analyze the data collected by SMDR4 and to organize it according to a company's needs.

Call Record

A type of record created by SMDR4. This record includes information about a call's duration and number dialed.

Call Report

A report that uses call record information collected by SMDR4 to itemize telephone activity.

CLID

Calling Line Identification is when the calling number is shown on the Norstar display.

Default

A value that SMDR4 assumes unless another one is specified.

KSU

Key Service Unit. The central hardware component in the Norstar system. The KSU has its own processor and memory, and provides a physical point for connection of various types of data terminals, telephones and expansion modules.

Norstar Record Format

An English language syntax organization of call records.

Physical Line

The physical connection between the Norstar system and the outside world.

Prompt

A message appearing on the Norstar display instructing the user to perform a specific task.

Record

A unit of information consisting of several related data items pertaining to a call.

SL-1 Record Format

The organization of information that SMDR4 data must be translated into before the data it contains can be read by an SL-1 call accounting program.

SMDR4

Station Message Detail Recording 4 is a unit that is connected to your Norstar Key Service Unit to record call activity.

System Coordinator

The person responsible for installing, administering and maintaining SMDR4 for a particular company.

Target Line

A virtual communication path between a physical line and a Norstar telephone.

Index

A

Account Code

- creating an Account Code list 3-10
- using 3-12

C

Conventions 1-1

F

Field Definitions 4-1

- CLID 4-8
- Norstar Records 4-1
- Real Time 4-9
- SL-1 3-6

L

Language Preference 4-11

M

- M7100/M7208 telephones 2-4
- M7310/M7324 telephones 2-3

N

- Norstar Record 4-1
- Norstar Record Format
 - Standard CLID Records 4-7
 - Standard format 4-7

P

Printable Line Descriptions 4-2

- Call Released 4-4
- Conference 4-3
- Digits Dialed 4-4
- From Transfer 4-4
- Hold/Unhold 4-3
- Incoming Call 4-3
- Invalid Password 4-4
- No Answer 4-3
- Outgoing Call 4-3
- SMDR4 Restart 4-2
- Transferred 4-4

Printers

- setting the speed 3-2

Programming 3-14

- account code autodial button 3-14
- account feature code memory button 3-14

programming parameters 3-1

Programming SMDR4 2-3

- using M7100/M7208 telephones 2-3
- using M7310/M7324 telephones 2-3

R

Record Format 4-9

- CLID 4-6
- Real Time 4-9
- SL-1 CLID 3-3

Record Types

- SL-1 3-7

Report Type 3-7

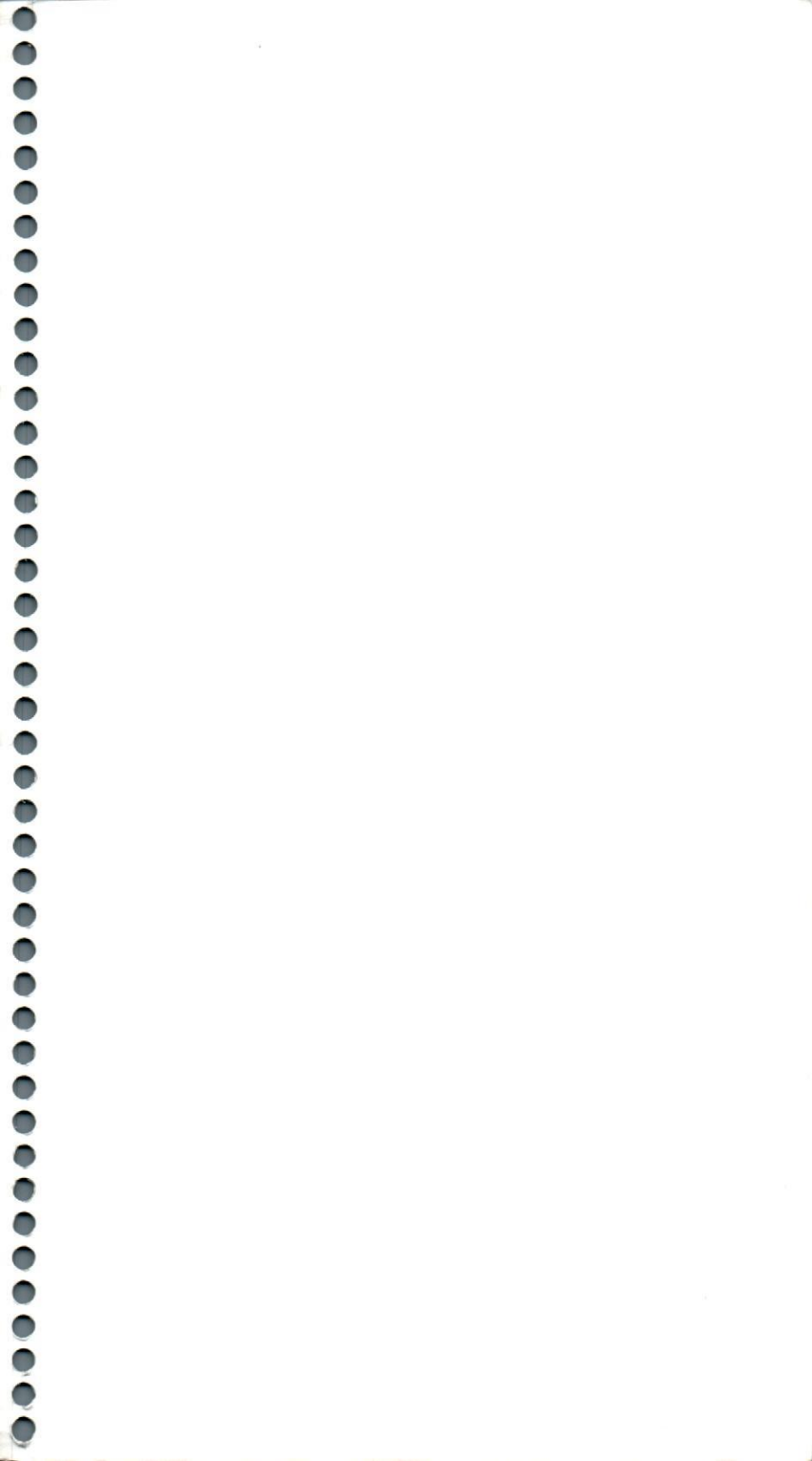
- Accounts 3-8
- All 3-8
- outgoing 3-8
- prefix 3-8
- setting 3-8
 - using the M7310/M7324 telephone 3-8
 - using the M7100/M7208 telephone 3-10

S

SMDR4 Main Menu 2-4
 exiting 2-5
System Coordinator 2-3
System Overview 2-2

T

Troubleshooting
 error messages 5-1
 printer problems 5-1



Meridian and Norstar are trademarks of Northern Telecom.

Meridian Norstar Station Message Detail Recording 4 is manufactured by Northern Telecom.

Order Number P0801973 Issue 01

Printed in Canada